

 **Peter Contreras/R10/USEPA/US**

07/10/2008 10:01 AM

To Jennifer Parker/R10/USEPA/US@EPA

cc

bcc

Subject Fw: Tulalip UIC opinion

fyi -- share w/RCRA folks as appropriate.

pc

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Peter Contreras, Manager
Ground Water Unit
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----- Forwarded by Peter Contreras/R10/USEPA/US on 07/10/2008 09:59 AM -----

 **Martha Lentz/R10/USEPA/US**

06/25/2007 11:37 AM

To "Clint Jacob" <CJacob@landauinc.com>

cc Michael Cox/R10/USEPA/US@EPA, Peter Contreras/R10/USEPA/US@EPA, Kirk Robinson/R10/USEPA/US@EPA

Subject Re: Tulalip UIC opinion

Clint... Thank you so much... Your letter is perfect!

Martha Lentz
Hydrogeologist
Office of Environmental Assessment
206-553-1593

-----"Clint Jacob" <CJacob@landauinc.com> wrote: -----

To: Martha Lentz/R10/USEPA/US@EPA
From: "Clint Jacob" <CJacob@landauinc.com>
Date: 06/25/2007 10:56AM
cc: "Bach, Carl M" <carl.m.bach@boeing.com>, "Jerry Ninteman" <JNinteman@landauinc.com>, "Terry McGourty" <TMcGourty@landauinc.com>
Subject: Tulalip UIC opinion

Martha:

As you requested, we have evaluated the proposed renewal and amendment of the

Tulalip Tribes UIC permit for Quilceda Village. We have reviewed the Application for Rule Authorization of Underground Injection Control Facility (Nov 2006) that that we received from you last Thursday, and understand current injection and proposed injection under the reauthorization to be as follows:

- Injected water is comprised of combined sanitary wastewater and stormwater from Quilceda Village that has been treated by the Tribes treatment plant to drinking water MCLs.
- The current permit allows injection of up to 250,000 gallons per day (GPD) into the horizontal injection well system (i.e., infiltration trench) located just west of I-5.
- The infiltration system is approximately 4,000 ft long and made up of multiple discrete trench segments with individual flow control systems.
- Infiltration of waste water has occurred under the existing permit since June 2003. For the period of June 2003- June 2006 the average infiltration rate has been 120,000 GPD, less than half of what is authorized under the current UIC permit.
- During this period of infiltration, groundwater mounding in the immediate vicinity of the infiltration trenches has been much less than anticipated. As a result of rapid infiltration, only 3-4 segments of the 19 segment infiltration trench are utilized at any given time.
- The permit reauthorization is for 5 yrs and proposes an increased maximum daily flow rate of 300,000 GPD and a maximum monthly flow of 9,125,000 gallons.
- The Tribes 20 year plan anticipates a peak waste water flow of 4.0 million GPD. A 400 room hotel is under construction and the tribe anticipates additional build out that might include amusement parks, recreation facilities, and businesses.

We have plotted groundwater elevation data from our monitoring network for the trichloroethene (TCE) groundwater plume located to the north of the Tribes' infiltration system. Semiannual data from January 2003 through January 2007 was plotted. Groundwater flow directions during this period are consistent with flow directions observed prior to waste water infiltration and affects of infiltration are not observed.

It is our opinion that permit reauthorization and increasing the maximum daily flow rate to 300,000 GPD and a maximum monthly flow 9,125,000 gallons will not adversely affect the TCE groundwater plume.

Pls let us know if you have additional questions or would like to discuss this further.
Clint

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